AMENDMENTS TO THE CLAIMS:

Claim 1. (Canceled)

Claim 2. (Currently Amended) A rolling bearing assembly having a temperature sensor built therein, which bearing assembly comprises:

stationary and rotary bearing rings one positioned inside the other; a sealing member secured to the stationary bearing ring; and

the temperature sensor secured to the sealing member for measuring a temperature inside the bearing assembly ~~The rolling bearing assembly as claimed in Claim 1~~,

wherein the sealing member includes a core metal fitted to the stationary bearing ring, and an elastic member made of a rubber or resin and integrated together with the core metal and wherein the temperature sensor is secured to the core metal in contact therewith.

Claim 3. (Original) The rolling bearing assembly as claimed in Claim 2, wherein the core metal includes a cylindrical portion mounted on a peripheral surface of the stationary bearing ring which confronts the rotary bearing ring, a flange portion engaged to at least one annular end face of the stationary bearing ring, and a slant portion bent from an inner end of the cylindrical portion so as to extend diagonally radially therefrom and wherein the temperature sensor is disposed within a space delimited by and between the cylindrical portion and the slant portion.

Claim 4. (Original) The rolling bearing assembly as claimed in Claim 2, wherein the temperature sensor is fixed to the sealing member by means of an integral molding of the elastic member with the core metal.

Claim 5. (Currently amended) The rolling bearing assembly as claimed in Claim ~~1~~2, wherein the temperature sensor is a chip-type laminar thermistor.